Complete Summary

GUIDELINE TITLE

Intrauterine growth restriction.

BIBLIOGRAPHIC SOURCE(S)

American College of Obstetricians and Gynecologists (ACOG). Intrauterine growth restriction. Washington (DC): American College of Obstetricians and Gynecologists (ACOG); 2000 Jan. 12 p. (ACOG practice bulletin; no. 12). [108 references]

GUIDELINE STATUS

This is the current release of the guideline.

According to the guideline developer, this guideline is still considered to be current as of December 2005, based on a review of literature published that is performed every 18-24 months following the original guideline publication.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

- Intrauterine growth restriction (IUGR)
- Small for gestational age (SGA)

GUIDELINE CATEGORY

Diagnosis
Evaluation
Management
Risk Assessment

Screening
Treatment

CLINICAL SPECIALTY

Obstetrics and Gynecology

INTENDED USERS

Physicians

GUIDELINE OBJECTIVE(S)

- To aid practitioners in making decisions about appropriate obstetric and gynecologic care
- To describe the etiology, diagnosis, and management of intrauterine growth restriction (IUGR)

TARGET POPULATION

- All pregnant women (Screening)
- Pregnant women carrying fetuses with diagnosed or suspected intrauterine growth restriction (Management/Treatment)

INTERVENTIONS AND PRACTICES CONSIDERED

Screening/Diagnosis

1. Routine screening using classical clinical monitoring techniques, including serial fundal height measurements
2. Ultrasonography for patients with risk factors

Management/Treatment

1. Doppler ultrasonography to measure umbilical artery waveforms
2. Antepartum surveillance using Doppler velocimetry, contraction stress test, traditional biophysical profile (BPP), modified biophysical profile, or nonstress test (NST)
3. Interventions, including avoidance of smoking and treatment of infections

   Note: Interventions that were considered but not recommended because of insufficient evidence or questionable efficacy include bed rest, early delivery in the presence of pulsatile flow in waveforms from the umbilical vein, nutrient treatment or supplementation, plasma volume expansion, maternal oxygen therapy, heparin, and low-dose aspirin.

4. Delivery when risks of continued in utero development outweigh the benefits

MAJOR OUTCOMES CONSIDERED

- Predictive value of risk factors for intrauterine growth restriction
- Fetal morbidity and mortality
- Birth weight
- Neonatal morbidity

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

The MEDLINE database, the Cochrane Library, and the American College of Obstetricians and Gynecologists' (ACOG's) own internal resources were used to conduct a literature search to locate relevant articles published between January 1985 and March 1999. Priority was given to articles reporting results of original research, although review articles and commentaries also were consulted. Abstracts of research presented at symposia and scientific conferences were not considered adequate for inclusion in this document.

Guidelines published by organizations or institutions such as the National Institutes of Health and the American College of Obstetricians and Gynecologists were reviewed, and additional studies were located by reviewing bibliographies of identified articles.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Studies were reviewed and evaluated for quality according to the method outlined by the U.S. Preventive Services Task Force.

I Evidence obtained from at least one properly designed randomized controlled trial

II-1 Evidence obtained from well-designed controlled trials without randomization

II-2 Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group

II-3 Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence

III Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Analysis of available evidence was given priority in formulating recommendations. When reliable research was not available, expert opinions from obstetrician-gynecologists were used. See also the "Rating Scheme for the Strength of Recommendations" field regarding Grade C recommendations.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Based on the highest level of evidence found in the data, recommendations are provided and graded according to the following categories:

Level A - Recommendations are based on good and consistent scientific evidence.

Level B - Recommendations are based on limited or inconsistent scientific evidence.

Level C - Recommendations are based primarily on consensus and expert opinion.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Practice Bulletins are validated by two internal clinical review panels composed of practicing obstetrician-gynecologists generalists and sub-specialists. The final guidelines are also reviewed and approved by the American College of Obstetricians and Gynecologists (ACOG) Executive Board.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

The grades of evidence (I-III) and levels of recommendations (A-C) are defined at the end of "Major Recommendations."

The following recommendations are based on good and consistent scientific evidence (Level A):

- The use of Doppler ultrasonography to measure umbilical artery waveforms in the management of intrauterine growth restriction (IUGR) is associated with a reduction in perinatal death and may be considered a part of fetal evaluation once IUGR is suspected or diagnosed.
- Nutrient treatment or supplementation, zinc or calcium supplementation, plasma volume expansion, maternal oxygen therapy, antihypertensive therapy, heparin, and aspirin therapy have not been shown to be effective for prevention or treatment of IUGR.

The following recommendations are based primarily on consensus and expert opinion (Level C):

- Antepartum surveillance should be instituted once the possibility of extrauterine survival for the growth-restricted fetus has been determined. This may include Doppler velocimetry, contraction stress testing, nonstress test (NST) with amniotic fluid volume assessment, and biophysical profile (BPP).
- Routine screening for IUGR in low-risk patients should comprise classical clinical monitoring techniques. Ultrasound evaluation of the fetus is appropriate in patients determined to be at high risk.

Definitions:

Grades of Evidence

I Evidence obtained from at least one properly designed randomized controlled trial

II-1 Evidence obtained from well-designed controlled trials without randomization

II-2 Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group

II-3 Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled experiments also could be regarded as this type of evidence.

III Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees

Levels of Recommendations

Level A - Recommendations are based on good and consistent scientific evidence.

Level B - Recommendations are based on limited or inconsistent scientific evidence.

Level C - Recommendations are based primarily on consensus and expert opinion.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Overall Benefits

Appropriate management of pregnancies at risk for intrauterine growth restriction

Benefits of Doppler Ultrasonography

The use of Doppler ultrasonography to measure umbilical artery waveforms in the management of intrauterine growth restriction is associated with a reduction in perinatal death.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- These guidelines should not be construed as dictating an exclusive course of treatment or procedure. Variations in practice may be warranted based on the needs of the individual patient, resources, and limitations unique to the institution or type of practice.
- It must be emphasized that perinatal morbidity and mortality will continue to occur despite optimal management of the fetus with suspected intrauterine growth restriction. In those fetuses managed expectantly, antepartum injury or death may occur because current methods of fetal surveillance are less than perfect in the prediction of fetal outcome.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better
Staying Healthy

IOM DOMAIN

Effectiveness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

2000 Jan (reviewed 2005)

GUIDELINE DEVELOPER(S)

American College of Obstetricians and Gynecologists - Medical Specialty Society

SOURCE(S) OF FUNDING

American College of Obstetricians and Gynecologists (ACOG)

GUIDELINE COMMITTEE

American College of Obstetricians and Gynecologists (ACOG) Committee on Practice Bulletins-Obstetrics

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

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GUIDELINE AVAILABILITY

Electronic copies: Not available at this time.

Print copies: Available for purchase from the American College of Obstetricians and Gynecologists (ACOG) Distribution Center, PO Box 4500, Kearneysville, WV 25430-4500; telephone, 800-762-2264, ext. 192; e-mail: sales@acog.org. The ACOG Bookstore is available online at the ACOG Web site.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on September 14, 2004. The information was verified by the guideline developer on December 8, 2004.

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